

PART I: AMENDMENT TO CLAIMS

IN THE CLAIMS

Please replace claims 2, 3, 10, and 12 with the rewritten version of claims 2, 3, 10, and 12 submitted below. Pursuant to 37 C.F.R. 1.121(c)(1)(ii), attached hereto are the marked-up version of the claims showing the changes made in this amendment.

Please cancel claim 1.

Please add claims 18-30 below.

2. (Amended) A medium feeding apparatus comprising:

at least one align roller to align a medium in a path; and
a feed assistance member comprising:

(i) a shaft;

(ii) a feed assistance roller rotably mounted to the shaft and positioned to apply pressure on the medium in the path to stabilize the feed of the medium, wherein the feed assistance member is not rotably connected to the align roller, and wherein the feed assistance roller is not vertically aligned with any align roller.

3. (Amended) The medium feeding apparatus of claim 2, wherein the at least one align roller comprises at least one vertical align roller to align the medium in the vertical direction and further comprising a lateral align roller to align the medium in the lateral direction, wherein the feed assistance member is mounted between one lateral align roller and one vertical align roller.

10. (Amended) A medium processing device including a medium feeding apparatus to feed the medium through a feed path in the processing device, wherein the medium feeding apparatus comprises:

at least one align roller to align a medium in a path; and
a feed assistance member comprising:

C

C2/
cont'd

(i) a shaft;

(ii) a feed assistance roller rotably mounted to the shaft and positioned to apply pressure on the medium in the path to stabilize the feed of the medium, wherein the feed assistance member is not rotably connected to the align roller, and wherein the feed assistance roller is not vertically aligned with any align roller.

C3

12. (Amended) The medium processing device of claim 10, wherein the at least one align roller comprises at least one vertical align roller to align the medium in the vertical direction and wherein the medium feeding apparatus further comprises a lateral align roller to align the medium in the lateral direction, wherein the feed assistance member is mounted between one lateral align roller and one vertical align roller.

Please add claims 18-28 as follows:

C4

Sub 23
E1

18. A feed assistance apparatus for feeding a medium in a medium processing apparatus, comprising:

at least one align roller for feeding the medium;

a member portion contacting said medium being fed to increase a frictional force generated on the medium,

wherein the member portion is not rotably connected to the align roller, and wherein the member portion is not vertically aligned with any align roller.

Sub 23
E2

19. The feed assistance apparatus of claim 18, wherein the member portion is non-rotatable.

Sub 23
E3

20. The feed assistance apparatus of claim 18, further comprising a shaft portion supported in a bracket and disposed through the member portion, wherein the member portion

rotates around the shaft portion so as to move by a force from the medium, wherein the shaft portion is not rotably connected to the align roller.

21. The feed assistance apparatus of claim 18, wherein the at least one align roller comprises at least one vertical align roller to align the medium in the vertical direction and further comprising a lateral align roller to align the medium in the lateral direction, wherein the member portion is mounted between one lateral align roller and one vertical align roller.

22. The feed assistance apparatus of claim 18, wherein the align rollers have a non-circular cross section for feeding the medium.

23. The feed assistance apparatus of claim 18, wherein the member portion is aligned in the vertical direction with respect to medium movement.

24. The feed assistance apparatus of claim 18, wherein the medium is paper.

25. The feed assistance apparatus of claim 18, wherein the member portion does not contact any align roller when the medium is not contacting the member portion.

26. The feed assistance apparatus of claim 21, wherein the at least one vertical align roller comprises two vertical align rollers, and wherein the feed assistance roller is further mounted between the two vertical align rollers.

27. The medium feeding apparatus of claim 2, wherein the feed assistance roller does not contact any align roller when the medium is not positioned in the path.

✓ 28. The medium feeding apparatus of claim 3, wherein the at least one vertical align roller comprises two vertical align rollers, and wherein the feed assistance roller is further mounted between the two vertical align rollers.

29. The feed assistance apparatus of claim 18, wherein the member portion does not contact any align roller when the medium is not positioned in the path.

30. The medium processing device of claim 10, wherein the feed assistance roller does not contact any align roller when the medium is not positioned in the path.

✓ 31. The medium processing device of claim 12, wherein the at least one vertical align roller comprises two vertical align rollers, and wherein the feed assistance roller is further mounted between the two vertical align rollers.

CLEAN VERSION OF ENTIRE SET OF PENDING CLAIMS 1-20

SUBMITTED WITH PRELIMINARY AMENDMENT FILED

NOVEMBER 6, 2000 UNDER 37 C.F.R. 1.121(c)(3)

2. (Amended) A medium feeding apparatus comprising:
at least one align roller to align a medium in a path; and
a feed assistance member comprising:
 - (i) a shaft;
 - (ii) a feed assistance roller rotably mounted to the shaft and positioned to apply pressure on the medium in the path to stabilize the feed of the medium, wherein the feed assistance member is not rotably connected to the align roller, and wherein the feed assistance roller is not vertically aligned with any align roller.
3. (Amended) The medium feeding apparatus of claim 2, wherein the at least one align roller comprises at least one vertical align roller to align the medium in the vertical direction and further comprising a lateral align roller to align the medium in the lateral direction, wherein the feed assistance member is mounted between one lateral align roller and one vertical align roller.
4. The medium feeding apparatus of claim 3, wherein the align rollers have a non-circular cross section for feeding the medium.
5. The medium feeding apparatus of claim 3, wherein the feed assistance member is aligned in the vertical direction with respect to medium movement.
6. The medium feeding apparatus of claim 2, wherein the feed assistance member further comprises:
two brackets including open grooves, wherein the shaft is disposed in the grooves of the bracket.

7. The medium feeding apparatus of claim 2, wherein the total weight of the feed assistance roller is applied onto the medium.

8. The medium feeding apparatus of claim 6, wherein the feed assistance member further comprises a spring for urging the feed assistance roller onto the medium.

9. The medium feeding apparatus of claim 6, wherein the medium is paper.

10. (Amended) A medium processing device including a medium feeding apparatus to feed the medium through a feed path in the processing device, wherein the medium feeding apparatus comprises:

at least one align roller to align a medium in a path; and

a feed assistance member comprising:

(i) a shaft;

(ii) a feed assistance roller rotably mounted to the shaft and positioned to apply pressure on the medium in the path to stabilize the feed of the medium, wherein the feed assistance member is not rotably connected to the align roller, and wherein the feed assistance roller is not vertically aligned with any align roller.

11. The medium processing device of claim 10, wherein the processing device comprises a printer and the medium comprises paper.

12. (Amended) The medium processing device of claim 10, wherein the at least one align roller comprises at least one vertical align roller to align the medium in the vertical direction and wherein the medium feeding apparatus further comprises a lateral align roller to align the medium in the lateral direction, wherein the feed assistance member is mounted between one lateral align roller and one vertical align roller.

13. The medium processing device of claim 10, wherein the align rollers have a non-circular cross section for feeding the medium.

14. The medium processing device of claim 12, wherein the feed assistance member is aligned in the vertical direction with respect to medium movement.

15. The medium processing device of claim 10, wherein the feed assistance member further comprises

two brackets including open grooves, wherein the shaft is disposed in the grooves of the bracket.

16. The medium processing device of claim 10, wherein the total weight of the feed assistance roller is applied onto the medium.

17. The medium processing device of claim 15, wherein the medium feeding apparatus further comprises a spring for urging the feed assistance roller onto the medium.

18. A feed assistance apparatus for feeding a medium in a medium processing apparatus, comprising:

at least one align roller for feeding said medium;

a member portion contacting said medium being fed to increase a frictional force generated on said medium,

wherein the member portion not rotably connected to the align roller, and wherein the member portion is not vertically aligned with any align roller.

19. The feed assistance apparatus of claim 18, wherein the member portion is non-rotatable.

20. The feed assistance apparatus of claim 18, further comprising a shaft portion supported in a bracket and disposed through said member portion, wherein the member portion rotates around said shaft portion so as to move by a force from said medium, wherein the shaft portion is not rotably connected to the align roller.

21. The feed assistance apparatus of claim 18, wherein the at least one align roller comprises at least one vertical align roller to align the medium in the vertical direction and further comprising a lateral align roller to align the medium in the lateral direction, wherein the member portion is mounted between one lateral align roller and one vertical align roller.

22. The feed assistance apparatus of claim 18, wherein the align rollers have a non-circular cross section for feeding the medium.

23. The feed assistance apparatus of claim 18, wherein the member portion is aligned in the vertical direction with respect to medium movement.

24. The feed assistance apparatus of claim 18, wherein the medium is paper.

25. The feed assistance apparatus of claim 18, wherein the member portion does not contact any align roller when the medium is not contacting the member portion.

26. The feed assistance apparatus of claim 21, wherein the at least one vertical align roller comprises two vertical align rollers, and wherein the feed assistance roller is further mounted between the two vertical align rollers.

27. The medium feeding apparatus of claim 2, wherein the feed assistance roller does not contact any align roller when the medium is not positioned in the path.

28. The medium feeding apparatus of claim 3, wherein the at least one vertical align roller comprises two vertical align rollers, and wherein the feed assistance roller is further mounted between the two vertical align rollers.

29. The medium processing device of claim 10, wherein the feed assistance roller does not contact any align roller when the medium is not positioned in the path.

30. The medium processing device of claim 12, wherein the at least one vertical align roller comprises two vertical align rollers, and wherein the feed assistance roller is further mounted between the two vertical align rollers.